

VE Study: Remedial Design of the Cuyahoga River Gorge Dam GLLA Project, Cuyahoga Falls, Ohio, EPA, LRB, Memphis District

1. Comment (Speculation No. 3 – Leave sheet pile wall):

- a. Consider leaving in place the sheetpile raceway that runs adjacent to the former power plant shoreline if it doesn't limit the abilities of the dredging equipment and processing barges.

2. Comment (Speculation No. 4 – Move mixing plant to the other parking lot):

- a. Additional cost/efficiency savings may be achieved by switching the location of the staging areas near the disposal cells and getting the PFTM operations even closer to the disposal cells. The PFTM operations could be handled in the parking lot at the Chuckery Indian Signal Tree Trailhead and the disposal area staging and temporary facilities could be established at the parking lot north of the cricket pitch. Since the construction of the disposal cells will occur before sediment removal takes place, potentially both projects could utilize the parking lot at the Chuckery Indian Signal Tree Trailhead.

3. Comment No. (Speculation No. 7 – Use the old power plant area as the disposal area):

- a. Depending on the stability and strength of the ground and bulkhead, the former power plant site could be used as a disposal cell. Given the location in relation to the dam pool, this could result in significant transport cost savings.

4. Comment No. (Speculation No. 9 – Conduct sub-bottom profiling):

- a. We recommend conducting sub-bottom profiling to better define the bedrock layer, which could reduce uncertainties related to dredge volume.

5. Comment No. (Speculation No. 11 – Excavate the backfill at the current mixing power plant site to use for constructing the berms):

- a. We recommend evaluating the backfill at the former power plant site as a potential borrow source for the disposal area berms.

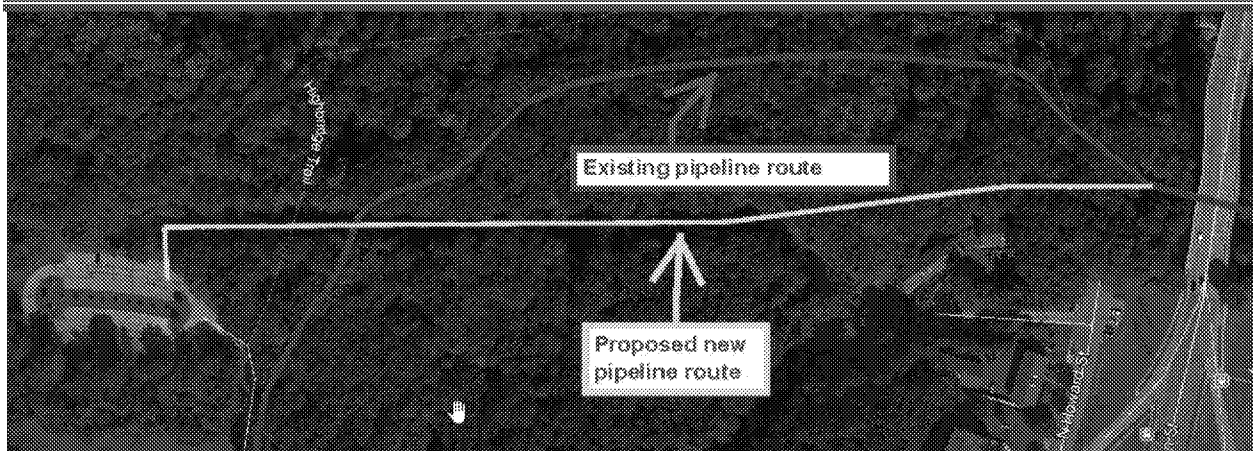
6. Comment No. (Speculation No. 14 – Conduct a cost and schedule risk analysis):

- a. We recommend conducting a Cost and Schedule Risk Analysis (CSRA) to identify, analyze, and account for project specific risks in project cost and schedule estimates. The result is a range of project costs representing different confidence levels. This gives the management team an effective additional tool to assist in the decision-making process associated with project planning and design.

7. Comment No. (Speculation No. 39 – Optimize the length of the pipeline in the northwest corner, utilize electrical power lines):

- a. Consider dropping off the Highbridge Trail and connecting to the electrical power line right-of-way just west of Main Street to reduce the overall length of pipeline. See figure.

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8. **Comment No. (Speculation No. 68 – Maximization of the cost share with the construction of the berm or similar activities):**
 - a. The VE team recommends continuing to explore ways of maximizing the non-federal cost share that is generated from the construction of the berms and similar activities.
9. **Comment No. (Speculation No. 73 – Consider doing additional stability analysis on the settling of the disposal area to ensure that a deep seeded failure will not affect the existing utilities):**
 - a. The VE team recommends collecting borings and subsurface information within the wetlands and disposal cell C to determine if ground improvements will be necessary. Consider collecting more borings across the site, as well, and conducting additional stability analyses.
10. **Comment No. (Speculation No. 76 – Provide provision for contractor to bid other alternative methods to remove the sediment):**
 - a. Consider including Value Engineering Change Proposals (VECP) clause in the construction contract to allow the contractor to bid alternative methods to transport/stabilize sediment in order to reduce risk associated with the use of proprietary technology. Also consider performance-based specifications.
11. **Comment No. (Speculation No. 77 – Consider different production rates with different methods):**
 - a. Consider different methods/equipment that may allow the contractor to work more efficiently.
12. **Comment No. (Speculation No. 78 – Consider a higher unit weight for PFTM in the settlement and stability evaluations):**
 - a. The VE team thinks that the addition of the cement and probable reworking and compacting of the sediment as it cures will likely produce a higher unit weight closer to 120 pcf, which is a typical soil unit weight. Consider using a higher unit weight for the stabilized sediment in the settlement and stability evaluations.

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13. Comment No. (Speculation No. 79 – Provide justification for how the shear strength parameters were developed for the rubbish/urban fill used in the stability analyses):

- a. It is generally considered that settlements of uncontrolled landfills are unpredictable based on any geotechnical analysis. It is also difficult to predict the strength of these rubbish fills particularly with voids and general trash. The VE team recommends more fully developing the shear strength parameters for the rubbish/urban fill used in the stability analyses.